

# On the Identity of *Stylarioides inflata* (Treadwell) and Its Extended Distribution (Annelida)<sup>1</sup>

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THE IDENTITY of a common intertidal member of the family Flabelligeridae (polychaetous annelid) forms the basis of this report. The species is redescribed after a study of holotype specimens and other individuals from both adjacent and more distant regions. The characters of the prostomial and peristomial parts and the structure of transitional setae are detailed.

The materials were collected from widely scattered parts of the northeastern Pacific by numerous individuals. Holotypes and other specimens are deposited in the Allan Hancock Foundation of the University of Southern California. Illustrations were prepared by Anker Petersen, staff artist of the Allan Hancock Foundation.

Family FLABELLIGERIDAE St. Joseph, 1894

Genus STYLARIOIDES delle Chiaje, 1841

*Stylarioides inflata* (Treadwell)

Figs. 1a-c, 2a-f

*Trophonia inflata* Treadwell, 1914: 213-214, pl. 12, fig. 33.

*Trophonia minuta* Treadwell, 1914: 213, pl. 12, fig. 32.

*Stylarioides dimissus* Hartman, 1936: 21.

*Stylarioides inflata* Berkeley, 1941: 46.

## MATERIALS EXAMINED

Holotype specimens of *Trophonia inflata* from Santa Catalina Island and others so reported (Treadwell, 1914) from Portuguese Bend and San Diego, California, in depths to 21-28 fm.; holotype specimen of *Trophonia minuta* from off La Jolla in 10 fm. Other collections come from Caspar, Mendocino County, shore; Moss Beach, San Mateo County, shore; off central California in 18-42 fm.; and along shaley coves of southern California, shore. The following station numbers of the *Velero III* (see Fraser, 1943, for data) are represented: 1191 (1), 1207 (1), 1210 (1), 1232 (5), 1260 (3), 1284 (2), 1417 (2), 1437 (2), 1456 (3), and 1468 (2), from shore to 39 fm., and including geographic areas from Oregon to Baja California, Mexico.

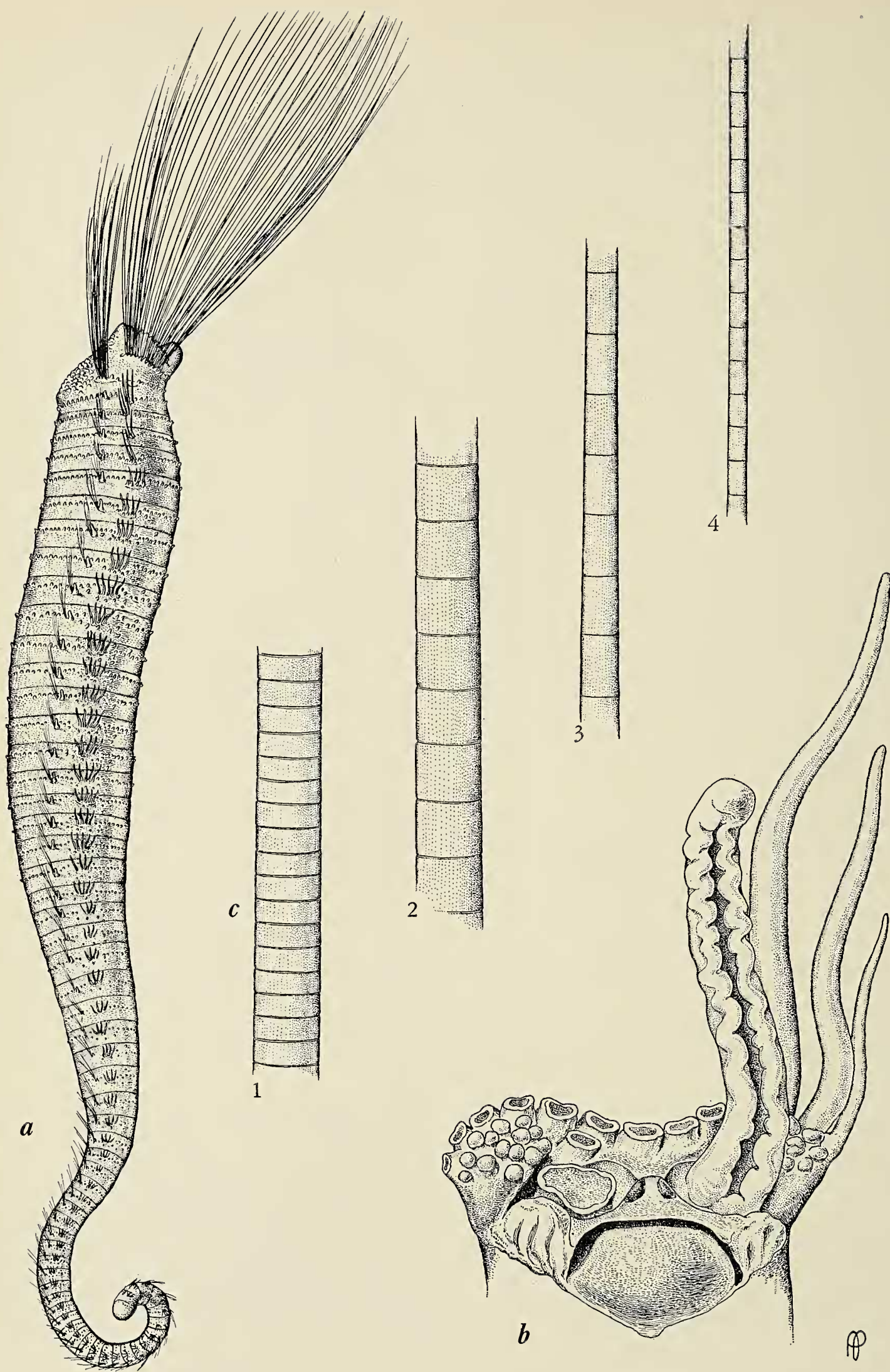
The type collections of *Trophonia minuta* and *T. inflata* have been compared and are considered to represent a single species. As *minuta* is preoccupied, the correct specific name is *inflata*, as used recently (1941) by Berkeley. *Stylarioides dimissus* Hartman, 1936, proposed to replace the preoccupied name, *minuta* Treadwell, 1914, is thus also synonymous.

The type specimen of *Trophonia inflata* from Santa Catalina Island has been dried at some time but the characteristic features of cephalic plaque and uncini are still visible. The specimen labeled *T. minuta* comes from a calcareous tube in sponge. Its anterior dorsal end is enlarged and obliquely truncate (Fig. 1a), covered with a thin layer of fine

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sand grains. The first 2 setal fascicles are much the longest and strongest, and directed far forward to form a cephalic cage about the anterior end. The first neuropodial fascicle has about 12 long, slender, transversely barred setae; its notopodium is larger and more conspicuous. The second segment has shorter neuropodia and notopodia with setal fascicles similar to those in front but smaller. The third segment has more reduced setae than those in front; its notosetae number 6 to 8 in a fascicle; the neurosetae number 5 or 6 and, like those in front, are distally pointed. Thereafter, notosetae come to be inconspicuous and number only 3 or 4 in a bundle; this order is continued to the end of the body. From the fourth segment, the neurosetae are transitional between pointed setae and falcigerous uncini. The distal end is falcate and slightly to considerably thickened at the shoulder (Fig. 2*b*). A weak fracture, suggesting the articulation of a composite uncinus, is visible with favorable illumination; such uncini are present in segments 4 to 6 (Fig. 2*a-c*); in addition, an occasional transitional pointed seta can be found (Fig. 2*d*). From the seventh neuropodium, the typical simple hooks (Fig. 2*f*) are present and continued to the end of the body. They number 3 or 4 in a series or increase to 5 or 6 at segments 10 to 25, where the body is thickest. They are arranged in a single fan-shaped fascicle and are accompanied by very slender, hair-like, barred setae, located immediately in front of the uncini and alternating regularly with them.

The fifth segment has a pair of large nephridial apertures located just within the neurosetal fascicle and on the ventral side.

Based on various collections examined, the total number of segments ranges from 52 to 75; length of a larger specimen from southern California is 50 to 60 mm. (preserved). The

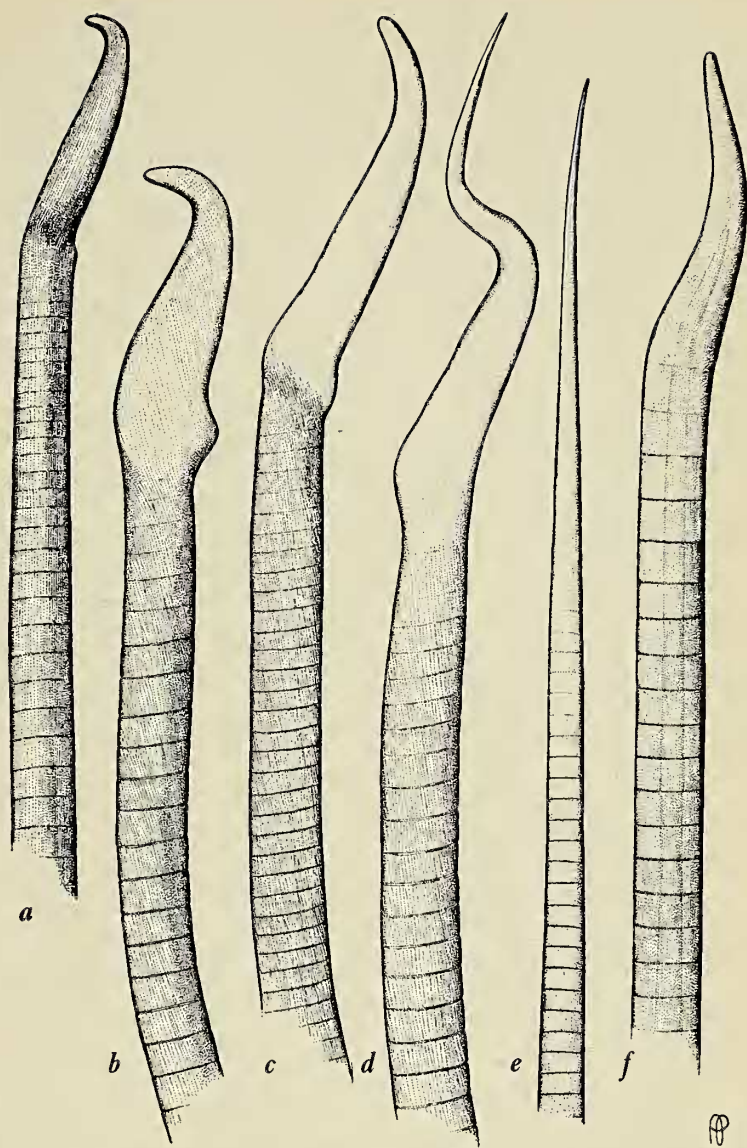


FIG. 2. *Stylarioides inflata*. *a*, Uncinus from fourth neuropodium,  $\times 842$ ; *b*, uncinus from fifth neuropodium,  $\times 842$ ; *c*, uncinus from sixth neuropodium,  $\times 842$ ; *d*, transitional uncinus from sixth neuropodium,  $\times 842$ ; *e*, notopodial seta from a median parapodium,  $\times 482$ ; *f*, neuropodial uncinus from a median parapodium,  $\times 482$ .

body is thickest in the region of segments 20 to 25 and tapers to a narrow caudal end. The epithelial surface of the body is nearly smooth except for single rows of papillar fringe at the anterior end of the segment; this fringe extends around the body as a circlet and gradually diminishes in the posterior two thirds so as to be hardly visible.

The prostomium, to be seen only by dissection into the anterior end, is a small lobe with a pair of very large, nearly converging, dark, lenticulated eyes (Fig. 1*b*). The eyes are

FIG. 1. *Stylarioides inflata*. *a*, Entire individual in right lateral view,  $\times 4$ ; *b*, anterior end seen from the front, right palpus and all except 3 tentacles cut off near the base, showing left palpus in place, prostomium with large eyes and oral slit,  $\times 23.2$ ; *c*, portions of a barred seta from the first segment: 1, near the base, 2, near the middle, 3, towards the tip, and 4, at the tip,  $\times 162$ .



located on a prominent cone between the palpal bases. Palpi are paired, large, broad, deeply grooved, and intermediate in length between the larger and the smaller tentacles; they are inserted at the ventrolateral margins of the prostomium. The tentacles are of 2 sizes; on each side there are 6 larger dorsal ones in a crescentic arrangement and continuous with the corresponding ones from the opposite side; in addition there are about 13 smaller ones on a side, arranged within this crescent around the buccal region. All of the tentacles are long, cylindrical, and taper to blunt tips. The mouth is a broad, conspicuous crescent below the prostomial lobe and opens into a voluminous, pouch-like proboscis.

The burrow is long, U-shaped, larger at the cephalic end, and limited in diameter so that the contracted animal is closely surrounded; it is found in shale rocks or other penetrable materials such as sponge and shell masses.

#### DISTRIBUTION

*Stylarioides inflata* is common in low inter-

tidal zones to 39 fathoms, in the warmer parts of the northeast Pacific, from Oregon south at least to Baja California, Mexico.

#### REFERENCES

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